UPPER FEATHER RIVER IRWM

PROJECT INFORMATION FORM

Please submit by 5:00 p.m. on August 3, 2015, to UFR.contact@gmail.com

Please provide information in the tables below:

I. PROJECT PROPONENT INFORMATION

Agency / Organization	Sierra Institute for Community and Environment/Lake Almanor Watershed Group
Name of Primary Contact	Courtney Gomola
Name of Secondary Contact	Jonathan Kusel
Mailing Address	PO Box 11/4438 Main St, Taylorsville, CA 95983
E-mail	CGomola@SierraInstitute.us
Phone	530-284-1022
Other Cooperating Agencies / Organizations / Stakeholders	Mountain Meadows Conservancy, Maidu Summit Consortium
Is your agency/organization committed to the project through completion? If not, please explain	Yes

II. GENERAL PROJECT INFORMATION

Project Title	FMW-10: Lake Almanor Basin Stewardship and Outreach Program
Project Category	☐ **Agricultural Land Stewardship** ☑ **Floodplains/Meadows/Waterbodies** ☐ **Municipal Services** ☐ **Tribal Advisory Committee** ☐ **Uplands/Forest**
Project Description (Briefly describe the project, in 300 words or less)	The Lake Almanor Watershed Group (LAWG, formerly the Almanor Basin Watershed Advisory Council) has addressed water quality, land use, and critical habitat issues in the Lake Almanor Basin since 2004. A key aspect of this work has been engaging the public in discussions and presentations to advance watershed stewardship holistically throughout Lake Almanor communities. This work has involved public meetings and forums, individual outreach activities, as well as the creation of informational pamphlets and brochures. Although past work has successfully been implemented, and more public support garnered for watershed stewardship activities, there is an imminent need for large-scale reductions in non-point sources of nutrient deposition into the Lake and

	widespread education on the role of residents and visitors in these and other current issues. Increased nutrients, coupled with warmer, drier years, can not only lead to decreased water quality and detrimental algal blooms, but also create favorable habitat for the introduction of invasive species. This project will build upon established community connections and previous research to engage the public in activities that increase understanding of human-mediated influences on water quality and invasive species in Lake Almanor and surrounding water bodies, and develop actions to reduce nutrient deposition into these areas and the potential for invasive species introduction, among other relevant issues.
Project Location Description (e.g., along the south bank of stream/river between river miles or miles from Towns/intersection and/or address):	Lake Almanor and surrounding water bodies (ex: Butt Lake, Mountain Meadows Reservoir)
Latitude:	40 17.3' N
Longitude:	121 08.3' W

III. APPLICABLE IRWM PLAN OBJECTIVES ADDRESSED

For each of the objectives addressed by the project, provide a one to two sentence description of how the project contributes to attaining the objective and how the project outcomes will be quantified. If the project does not address *any* of the IRWM plan objectives, provide a one to two sentence description of how the project relates to a challenge or opportunity of the Region.

Upper Feather River IRWM Objectives:	**Will the project address the objective?**	**Brief explanation of project linkage to selected Objective**	**Quantification** (e.g. acres of streams/wetlands restored or enhanced)
Restore natural hydrologic functions.	☐ Yes ☑ N/A		
Reduce potential for catastrophic wildland fires in the Region.	☐ Yes ☑ N/A		
Build communication and collaboration among water resources stakeholders in the Region.	☑ Yes ☐ N/A	Although the water bodies are managed by PG&E or other private/public entities, visitors and residents recreate in and near these water bodies and are also often responsible for managing land adjacent to these bodies or tributaries of these water sources, thereby acting as stakeholders in the watershed. Increasing	N/A

Upper Feather River IRWM Objectives:	Will the project address the objective?	Brief explanation of project linkage to selected Objective	Quantification (e.g. acres of streams/wetlands restored or enhanced)
		understanding of their individual impacts on the health and quality of these water bodies, and resulting impacts on tourism and quality of life surrounding Lake Almanor and other areas will result in increased connection to the lake and the potential for collaboration among these stakeholders as they realize their role as watershed stewards. Success of increasing communication and collaboration will be measured by attendance of stakeholders from different areas around the water bodies at various community outreach events.	
Work with DWR to develop strategies and actions for the management, operation, and control of SWP facilities in the Upper Feather River Watershed in order to increase water supply, recreational, and environmental benefits to the Region.	☑ Yes ☐ N/A	Lake Almanor (LA), Butt Lake and MMR are critical aspects of the State Water Project and specifically the Staircase of Power. Increasing understanding of human-mediated impacts on water quality in these critical water resources will maintain and promote good water quality for downstream users and wildlife, as well as keep LA and other water bodies as appealing areas to recreate, supporting the water recreation-based tourism that drives the economies of many disadvantaged communities in the area. Success will be measured by the quantity and quality of outreach material created by SI/LAWG staff with input by DWR staff where appropriate. Outreach material will be more tangible when presented alongside the long-term monitoring data the LAWG is privy to as a result of their continued collection over the previous years.	N/A
Encourage municipal service providers to participate in regional water management actions that improve water supply and water quality.	☐ Yes ☑ N/A		

Upper Feather River IRWM Objectives:	**Will the project address the objective?**	**Brief explanation of project linkage to selected Objective**	**Quantification** (e.g. acres of streams/wetlands restored or enhanced)
Continue to actively engage in FERC relicensing of hydroelectric facilities in the Region.	☑ Yes ☐ N/A	LAWG members were contacted by previous County Supervisors to assist in making recommendations on the original FERC relicensing, which occurred over 10 years ago. Although we cannot be sure about future actions, we imagine that LAWG members will be contacted with dealing with recommendations that the SWB comes up with for the new FERC relicensing. Furthermore, FERC re-licensing is routinely brought up during LAWG meetings as it relates to the groups priorities, primarily related to the health of the Lake and recreation and economic opportunities for the area.	N/A
Address economic challenges of municipal service providers to serve customers.	☐ Yes ☑ N/A		
Protect, restore, and enhance the quality of surface and groundwater resources for all beneficial uses, consistent with the RWQC Basin Plan.	☑ Yes ☐ N/A	Increased nutrients, coupled with warmer, drier years, can not only lead to detrimental algal blooms, but also create favorable habitat for the introduction of invasive species and reduce water quality metrics needed for healthy fish populations. Successful implementation of this project will address this objective by increasing resident understanding of these variables and steps they can take to mediate these negative impacts. Success will be measured by the number of outreach materials dispersed and the number of individuals engaged in this outreach.	N/A
Address water resources and wastewater needs of DACs and Native Americans.	☐ Yes ☑ N/A		N/A
Coordinate management of recharge areas and protect	☐ Yes		

Upper Feather River IRWM Objectives:	**Will the project address the objective?**	**Brief explanation of project linkage to selected Objective**	**Quantification** (e.g. acres of streams/wetlands restored or enhanced)
groundwater resources.	☑ N/A		
Improve coordination of land use and water resources planning.	☐ Yes ☑ N/A		
Maximize agricultural, environmental and municipal water use efficiency.	☐ Yes ☑ N/A		
Effectively address climate change adaptation and/or mitigation in water resources management.	☑ Yes ☐ N/A	Warming temperatures and drier years exacerbate many of the negative anthropogenic influences on water health. By engaging community members and promoting their role as critical stewards of these waterways, we take a proactive role in mitigating some of the projected negative effects on lake health as a result of climate change. Success will be measured by the number of outreach materials dispersed and the number of individuals engaged in this outreach.	N/A
Improve efficiency and reliability of water supply and other water-related infrastructure.	☐ Yes ☑ N/A		
Enhance public awareness and understanding of water management issues and needs.	☑ Yes ☐ N/A	This project directly addresses this goal by engaging the public in outreach activities geared towards increased understanding of human-mediated impacts on water quality and ecosystem health. We will measure the effectiveness of these efforts by the number outreach activities, the number of individuals engaged in outreach activities, and the number of outreach materials dispersed.	N/A
Address economic challenges of agricultural producers.	☐ Yes ☑ N/A		
Work with counties/ communities/groups to make sure staff capacity exists for actual administration and	☑ Yes ☐ N/A	Sierra Institute has a long and robust history of receiving and effectively utilizing large grant dollars. Sierra Institute will	N/A

Upper Feather River IRWM Objectives:	Will the project address the objective?	Brief explanation of project linkage to selected Objective	Quantification (e.g. acres of streams/wetlands restored or enhanced)
implementation of grant funding.		facilitate LAWG in administering any financial support awarded to promote watershed stewardship through outreach activities, and success will be measured by successful implementation and reporting of grant activities after awards are received.	

If no objectives are addressed, describe how the project relates to a challenge or opportunity for the Region:

N/A

IV. PROJECT IMPACTS AND BENEFITS

Please provide a summary of the expected project benefits and impacts in the table below or check N/A if not applicable; **do no leave a blank cell.** Note that DWR encourages multi-benefit projects.

If applicable, describe benefits or impacts of the project with respect to:		
a. Native American Tribal Communities	☐ N/A	Many of these water bodies represent sacred places to the native Maidu people of the Almanor Basin. LAWG members include a tribal representative, who will provide opinions and suggestions on where and when to incorporate information on Maidu culture and history, including traditional stewardship practices and how these may be utilized by local landowners in efforts to be better stewards. Furthermore, we will explore opportunities to have outreach activities include presentations by the Maidu where appropriate. Encouraging watershed stewardship by residents and visitors and increasing their understanding of the role of traditional ecological practices will help protect these culturally significant places and promote the historic and culture resources that are rife in and around these water bodies.

b. Disadvantaged Communities[1]	☐ N/A	DACs populate the area around Lake Almanor (including Canyondam, Prattville, Chester and the upper reaches of the Peninsula) as well as those closest to Mountain Meadows Reservoir (Westwood and Clear Creek). These DACs are characterized by struggling economies, some of which rely solely on dollars brought in by recreation-based tourism in the area. This program helps protect these fragile economies by promoting watershed stewardship efforts by residents and visitors, ensuring that these water bodies remain a desirable destination for tourism rather than succumbing to water-quality related economic crashes such as those seen around Clear Lake in Lake County. Furthermore, by providing outreach materials directly geared towards members of DACs, we empower these individuals by giving them tools (through education) to become champions of their ecosystems and directly apply this new knowledge to improving water quality.
c. Environmental Justice[2]	☐ N/A	The native Maidu people of the Almanor Basin have been historically shortchanged and overlooked in environmental policies, with important cultural and economic resources pushed aside in favor of the initiatives of large, private and public entities. An outreach program geared toward protecting the health and quality of local water bodies and adjacent habitat help protect areas that provide ecological and cultural resources for these native inhabitants. Furthermore, the Maidu are receiving land easements as a result of PG&E settlements, providing land adjacent to these water bodies. Although proper stewardship of these areas by the Maidu is not in question, promoting more awareness and better stewardship by residents and visitors helps promote overall watershed health, and thereby mitigating negative impacts that might otherwise have been felt on areas adjacent to Maidu-managed land.
d. Drought Preparedness	☑ N/A	N/A

e. Assist the region in adapting to effects of climate change[3]	☐ N/A	Lake health issues are exacerbated by climate change and have been evidenced by the water quality monitoring done by the Lake Almanor Watershed Group (Lake Almanor Water Quality Report 2015). Warmer temperatures and decreased water quantity have negative influences on fish habitat, which are further impacted by nutrient deposition and invasive species. Mitigating the input of non-point nutrient sources and educating residents on problematic invasive species will slow down the deterioration of water quality compared to if measures were not taken. Furthermore, outreach activities will involve increasing resident and visitor awareness and understanding of the impacts of climate change and the interaction between these variables and their own actions.
f. Generation or reduction of greenhouse gas emissions (e.g. green technology)	☑ N/A	N/A
g. Other expected impacts or benefits that are not already mentioned elsewhere	☑ N/A	N/A

[1] A Disadvantaged Community is defined as a community with an annual median household (MHI) income that is less than 80 percent of the Statewide annual MHI. DWR's DAC mapping is available on the UFR website (http://featherriver.org/maps/) .
[2] Environmental Justice is defined as the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation and enforcement of environmental laws, regulations and policies. An example of environmental justice benefit would be to improve conditions (e.g. water supply, flooding, sanitation) in an area of racial minorities.
[3] Climate change effects are likely to include increased flooding, extended drought, and associated secondary effects such as increased wildfire risk, erosion, and sedimentation.

DWR encourages multiple benefit projects that address one or more of the following elements (PRC §75026(a). Indicate which elements are addressed by your project.

a. Water supply reliability, water conservation, water use efficiency	☐ Yes ☑ N/A	g. Drinking water treatment and distribution	☐ Yes ☑ N/A
b. Stormwater capture, storage, clean-up, treatment, management	☐ Yes ☑ N/A	h. Watershed protection and management	☑ Yes ☐ N/A
c. Removal of invasive non-native species, creation/enhancement of wetlands, acquisition/ protection/ restoration of open space and watershed lands	☑ Yes ☐ N/A	i. Contaminant and salt removal through reclamation/desalting, other treatment technologies and conveyance of recycled water for distribution to users	☐ Yes ☑ N/A
d. Non-point source pollution	☑ Yes	j. Planning and implementation of	☐ Yes

reduction, management and monitoring	☐ N/A	multipurpose flood management programs	☑ N/A
e. Groundwater recharge and management projects	☐ Yes ☑ N/A	k. Ecosystem and fisheries restoration and protection	☑ Yes ☐ N/A
f. Water banking, exchange, reclamation, and improvement of water quality	☐ Yes ☑ N/A		

V. RESOURCE MANAGEMENT STRATEGIES

For each resource management strategy (RMS) employed by the project, provide a one to two sentence description in the table below of how the project incorporates the strategy. A description of the RMS can be found in Volume 2 of the 2013 California Water Plan (http://featherriver.org/2013-california-water-plan-update/).

Resource Management Strategy	Will the Project incorporate RMS?	Description of how RMS to be employed, if applicable
Reduce Water Demand		
Agricultural Water Use Efficiency	☐ Yes ☑ No	
Urban water use efficiency	☐ Yes ☑ No	
Improve Flood Management		
Flood management	☐ Yes ☑ No	
Improve Operational Efficiency and Transfers		
Conveyance – regional/local	☐ Yes ☑ No	
System reoperation	☐ Yes ☑ No	
Water transfers	☐ Yes ☑ No	
Increase Water Supply		
Conjunctive management	☐ Yes ☑ No	
Precipitation Enhancement	☐ Yes ☑ No	
Municipal recycled water	☐ Yes ☑ No	
Surface storage – regional/local	☐ Yes ☑ No	
Improve Water Quality		
Drinking water treatment and distribution	☐ Yes ☑ No	
Groundwater remediation/aquifer remediation	☐ Yes ☑ No	
Matching water quality to water use	☐ Yes ☑ No	
Pollution prevention	☑ Yes ☐ No	This project addresses "Urban Impacts" and "Climate Change" issues raised in the California Water Plan. Through outreach activities the project will directly address urban impacts such as pollutant levels, surface runoff and the sustainability and viability of aquatic habitats by connecting with local residents and visitors regarding their actions in relation to these factors. Similarly, outreach activities will involve addressing the

Resource Management Strategy	Will the Project incorporate RMS?	Description of how RMS to be employed, if applicable
		connection between climate change and these variables, and how what may seem like small actions to residents and visitors may have large influence on the ecosystem, particularly as they are amplified as a result of changing climates. Furthermore, outreach will include the audience of visitors to marinas and recreational boating facilities, specifically in relation to aquatic invasive species.
Salt and salinity management	☐ Yes ☑ No	
Urban storm water runoff management	☑ Yes ☐ No	This project addresses "Climate Change" and "Misperception" issues raised in the California Water Plan in association with Urban Storm Water Runoff Management. There appears to be a great deal of misunderstanding of the impacts that fertilizer application, debris piling and littering can have on water quality health, particularly as a result of runoff and consequent deposition into water bodies. This project will address this issue by conducting outreach activities to raise awareness about these relationships, and the actual impact that these variables can have on water and ecosystem health. Furthermore, activities will address the connection between climate changes and these variables.
Practice Resource Stewardship		
Agricultural land stewardship	☐ Yes ☑ No	
Ecosystem restoration	☐ Yes ☑ No	
Forest management	☐ Yes ☑ No	
Land use planning and management	☐ Yes ☑ No	
Recharge area protection	☐ Yes ☑ No	
Sediment management	☐ Yes ☑ No	
Watershed management	☐ Yes ☑ No	
People and Water		
Economic incentives	☐ Yes ☑ No	
Outreach and engagement	☑ Yes ☐ No	This project addresses the Outreach and Engagement component of the CA Water Plan by directly involving the public in outreach activities associated with human-mediated nutrient deposition, invasive species, and the influence of climate change on water health and quality.
Water and culture	☑ Yes ☐ No	This project addresses the Water and Culture component of the CA Water Plan by protecting water and habitat resources important to native

Resource Management Strategy	Will the Project incorporate RMS?	Description of how RMS to be employed, if applicable
		Maidu people by directly involving the public in outreach activities associated with mitigating human-mediated nutrient deposition, invasive species, and the influence of climate change on water health and quality. As mentioned above, LAWG members include a Maidu Tribal representative, who will assistant with outreach material generation. Through Maidu participation, we will promote using traditional knowledge and practices to better sustain and integrate water management and provide models of sustainability, which local residents can incorporate into their own stewardship activities related to the watershed.
Water-dependent recreation	☑ Yes ☐ No	This project addresses the Water-dependent Recreation component of the CA Water Plan through education on the public's role in protecting water quality and recreational opportunities. Specifically, this will be accomplished by educating residents and businesses, as well as local youth, about outdoor ethics, preserving and protecting resources, and taking an active role in watershed stewardship. Although there are resources that LAWG makes available to the public related to current water quality issues, such as through the Annual Water Quality Reports, this project will work to explain water quality and stewardship issues in a way that is more compelling, comprehensible, and accessible to the general public, therefore making those involved in outreach activities more engaged.
Wastewater/NPDES	☐ Yes ☑ No	

Other RMS addressed and explanation:

N/A

VI. PROJECT COST AND FINANCING

Please provide any estimates of project cost, sources of funding, and operation and maintenance costs, as well as the source of the project cost in the table below.

PROJECT BUDGET

Project serves a need of a DAC?: ☐ Yes ☑ No
Funding Match Waiver request?: ☐ Yes ☑ No

	Category	Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source*	Total Cost
a.	**Direct Project Administration**	$139,224		$25,000 Lake Almanor Water Quality Monitoring $8,000 Sierra Nevada Conservancy Water Trails Grant (dependent on	
b.	**Land Purchase/Easement**				
c.	**Planning/Design/Engineering / Environmental**				
d.	**Construction/Implementation**				
e.	**Environmental Compliance/ Mitigation/Enhancement**				
f.	**Construction Administration**				
g.	**Other Costs**	$3,000			
h.	**Construction/Implementation Contingency**				
i.	**Grand Total (Sum rows (a) through (h) for each column)**	$142,224		$33,000	$142,224

j.	**Can the Project be phased?** ☑ **Yes** ☐ **No** If **yes**, provide cost breakdown by phases			
		Project Cost	**O&M Cost**	**Description of Phase**
	Phase 1-	$47,408		Development of outreach materials and strategy
	Phase 2-	$94,816		Outreach implementation
	Phase 3			
	Phase 4			

k.	**Explain how operation and maintenance costs will be financed for the 20-year planning period for project implementation (not grant funded).**	The Lake Almanor Watershed Group is a mostly volunteer-driven organization addressing pressing community and environmental needs in the Almanor Basin. The dedicated work of the group and community volunteers will maintain this project during the planning period.

l.	**Has a Cost/Benefit analysis been completed?**	☐ **Yes** ☑ **No**
m.	**Describe what impact there may be if the project is not funded (300 words or less)**	Lake Almanor and surrounding water bodies are already experiencing the negative impacts of climate change and direct anthropogenic activities on water quality and habitat health. If direct measures are not taken to mediate human-caused nutrient inputs, invasive species introduction and establishment, and water consumption, the negative effects on climate change on these water bodies will continue to be exacerbated, resulting in poor water quality, reduced tourism and the consequent economic impacts, and overall deterioration of watershed health.

*List all sources of funding.
Note: See Project Development Manual, Exhibit B, for assistance in completing this table (http://featherriver.org/documents/).

VIII. PROJECT STATUS AND SCHEDULE

Please provide a status of the project, level of completion as well as a description of the activities planned for each project stage. If unknown, enter **TBD**.

Project Stage	Check the Current Project Stage	Completed?	Description of Activities in Each Project Stage	Planned/ Actual Start Date (mm/yr)	Planned/ Actual Completion Date (mm/yr)
a. Assessment and Evaluation	☐	☑ Yes ☐ No ☐ N/A	Creation of the Lake Almanor Watershed Plan (2009) outlining needed activities to maintain and promote the health of Lake Almanor	December 2005	April 2009
b. Final Design	☑	☐ Yes ☑ No ☐ N/A	Creation of outreach materials and implementation of outreach activities. Specifically: One State of the Watershed Forums held in year one Completion of the updated watershed outreach plan within one year Sub-projects identified and implemented in year one	TBD	TBD

			Two State of the Watershed Forums held in year two Implementation of sub-projects in year two Two State of the Watershed Forums held in year three Implementation of sub-projects in year three		
c. Environmental Documentation (CEQA / NEPA)	☐	☐ Yes ☐ No ☑ N/A			
d. Permitting	☐	☐ Yes ☐ No ☑N/A			
e. Construction Contracting	☐	☐ Yes ☐ No ☑ N/A			
f. Construction Implementation	☐	☐ Yes ☐ No ☑ N/A			
Provide explanation if more than one project stage is checked as current status					

IX. PROJECT TECHNICAL FEASIBILITY

Please provide any related documents (date, title, author, and page numbers) that describe and confirm the technical feasibility of the project. See www.featherriver.org/catalog/index.php for documents gathered on the UFR Region.

a. List the adopted planning documents the proposed project is consistent with or supported by (e.g. General Plans, UWMPs, GWMPs, Water Master Plan, Habitat Conservation Plans, TMDLs, Basin Plans, etc.).	Upper Feather River IRWMP California State Water Plan
b. List technical reports and studies supporting the feasibility of this project.	Lake Almanor Water Quality Report 2015 (2015) prepared by Dr. Gina Johnston (CSU-Chico) and Scott McReynolds (CA-DWR) for the Plumas County Flood Control and Water Conservation District and Lake Almanor Watershed Advisory Group 2011 Lake Almanor Review: Survey of Water Quality, Trend Analysis and

	Recommendations prepared by Sierra Institute for Community and Environment on behalf od the Almanor Basin Watershed Advisory Committee Lake Almanor Watershed Management Plan (2009) prepared by Sierra Institute for Community and Environment Lake Almanor Watershed Assessment Report (2006) prepared by CH2MHill and Earthworks Restoration, Inc. for the Plumas County Flood Control and Water Conservation District Lake Almanor Stakeholder Report: Key issues in the Basin (2004) prepared by Sierra Institute for Community and Environment
c. Concisely describe the scientific basis (e.g. how much research has been conducted) **of the proposed project in 300 words or less.**	Water quality monitoring at Lake Almanor dates back to the 1960s, with monitoring performed by various groups, primarily California Department of Water Resources, Pacific Gas and Electric, and the Lake Almanor Watershed Group. A synthesis of the available results is documented in the 2011 Lake Almanor Review: Survey of Water Quality, Trend Analysis and Recommendations, prepared by Sierra Institute for Community and Environment on behalf of the Almanor Basin Watershed Advisory Committee. In this review there is a clear trend for increased water temperature, decreased dissolved oxygen, increases in total phosphorus, and decreases in suitable habitat for Salmonids. The Lake Almanor Water Quality Report 2015 (2015) prepared by Dr. Gina Johnston (CSU-Chico) and Scott McReynolds (CA-DWR) for the Plumas County Flood Control and Water Conservation District and Lake Almanor Watershed Advisory Group confirms these trends, and also showcases increased populations of phytoplankton and zooplankton, species that often result in algal blooms. These results provide the basis and elucidate the urgent need for targeted and effective outreach activities to mediate any impacts where possible.

d. Does the project implement green technology (e.g. alternate forms of energy, recycled materials, LID techniques, etc.).	☐ Yes ☐ No ☑ N/A If yes, please describe.
e. Are you an Urban Water Supplier[1]?	☐ Yes ☐ No ☑ N/A
f. Are you are an Agricultural Water Supplier[2]?	☐ Yes ☐ No ☑ N/A
g. Is the project related to groundwater?	☐ Yes ☑ No ☐ N/A If yes, please indicate which groundwater basin.

[1] Urban Water Supplier is defined as a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually.

[2] Agricultural Water Supplier is defined as a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding the acreage that receives recycled water.

Climate Change – Project Assessment Checklist

This climate change project assessment tool allows project applicants and the planning team to assess project consistency with Proposition 84 plan standards and RWMG plan assessment standards. The tool is a written checklist that asks GHG emissions and adaptation/resiliency questions.

Name of project: FMW-10 Lake Almanor Basin Stewardship and Outreach Program

Project applicant: Sierra Institute for Community and Environment/ Lake Almanor Watershed Group

GHG Emissions Assessment

Project Construction Emissions

(If you check any of the boxes, please see the attached worksheet)

☐ The project requires nonroad or off-road engines, equipment, or vehicles to complete.

☐ The project requires materials to be transported to the project site.

☐ The project requires workers to commute to the project site.

☐ The project is expected to generate GHG emissions for other reasons.

☑ The project does not have a construction phase and/or is not expected to generate GHG emissions during the construction phase.

Operating Emissions

(If you check any of the boxes, please see the attached worksheet)

☐ The project requires energy to operate.

☐ The project will generate electricity.

☐ The project will proactively manage forests to reduce wildfire risk.

☐ The project will affect wetland acreage.

☐ The project will include new trees.

☐ Project operations are expected to generate or reduce GHG emissions for other reasons.

Adaptation & Resiliency Assessment

Water Supply

Describe how the project makes the watershed (more/less) resilient to one or more of the following high priority water supply vulnerability issues:

- ☐ Not applicable
- ☐ Reduced snowmelt
- ☐ Unmet local water needs (drought)
- ☑ Increased invasive species

There are many vectors for invasive species to be introduced, or reintroduced, to an area where it hasn't been establishment. A major culprit of the introduction of invasive species to new areas is the unknowing visitor or resident, transporting invasive species propagules on their clothing, automobiles, recreation equipment, in livestock feed, etc. Fortunately, the adjective "unknowing" creates an opportunity to help rectify or reduce the rates of these disastrous transportations. This project aims to increase awareness about all levels of watershed stewardship in the local community, including resident and visitor's roles in invasive species prevention and management. Through this education, we aim to reduce rates of ignorant invasive species dispersal by making residents and visitors more aware of the role that they play in the cycle.

Water Demand

Describe how the project makes the watershed (more/less) resilient to one or more of the following high priority water demand vulnerability issues:

- ☑ Not applicable
- ☐ Increasing seasonal water use variability
- ☐ Unmet in-stream flow requirements
- ☐ Climate-sensitive crops
- ☐ Groundwater drought resiliency
- ☐ Water curtailment effectiveness

Water Quality

Describe how the project makes the watershed (more/less) resilient to one or more of the following high priority water quality vulnerability issues:

- ☐ Not applicable
- ☐ Increasing catastrophic wildfires
- ☑ Eutrophication (excessive nutrient pollution in a waterbody, often followed by algae blooms and other related water quality issues)
- ☑ Seasonal low flows and limited abilities for waterbodies to assimilate pollution
- ☐ Water treatment facility operations
- ☑ Unmet beneficial uses (municipal and domestic water supply, water contact recreation, cold freshwater habitat, spawning habitat, wildlife habitat, etc.)

A major aspect of this project work is increasing local understanding of the role that community actions play in watershed health, particularly in those waterbodies that are used for recreation. LAWG's Water Quality Monitoring Reports have shown the health of the lake to be decreasing, particularly in the areas of decreased dissolved oxygen, higher water temperatures, and more algal blooms. Although some of the factors that contribute to these outcomes cannot be mediated through outreach (such as lower cold water flows, less snowpack, warmer ambient temperatures, etc.) what can be changed are factors like non-point nutrient and waste deposition, and environmentally ethical actions in these and surrounding waterbodies. Through outreach and education activities, we aim to increase local understanding about effective ways to maintain their properties, lifestyles, and ethics in a way that benefits, or at the least does not negatively impact, their local waterbodies. By becoming better stewards- decreasing nutrient runoff from lakeshore properties, acting responsibly with their waste, and respecting and protecting local flora and fauna- residents will create a healthier and more sustainable watershed, which will in turn continue to provide all the environmental services that these communities rely on, including water-based recreation, abundant wildlife, and clean water.

Flooding

Describe how the project makes the watershed (more/less) resilient to one or more of the following high priority flooding vulnerability issues:

- ☑ Not applicable
- ☐ Aging critical flood protection
- ☐ Wildfires
- ☐ Critical infrastructure in a floodplain
- ☐ Insufficient flood control facilities

Ecosystem and Habitat

Describe how the project makes the watershed (more/less) resilient to one or more of the following high priority ecosystem and habitat vulnerability issues:

- ☐ Not applicable
- ☐ Climate-sensitive fauna or flora
- ☑ Recreation and economic activity
- ☐ Quantified environmental flow requirements
- ☑ Erosion and sedimentation
- ☑ Endangered or threatened species
- ☐ Fragmented habitat

Decreases in water quality can directly impact water-based recreation and tourism, and consequently harm local tourism-dependent economies. As stated under "Water Quality," local community members can play a big role in the health of waterbodies adjacent and near to their communities. By providing these individual with the tools through education to steward these local water bodies and properly manage lakeshore properties, we can maintain these waterbodies as a destination for water-based recreation, maintain and improve water quality by decreasing erosion and sedimentation in tributaries, and protect endangered or threatened species by reducing the potential introduction of invasive species that can displace those that are struggling.

Hydropower

Describe how the project makes the watershed (more/less) resilient to one or more of the following high priority hydropower vulnerability issues:

- ☑ Not applicable
- ☐ Reduced hydropower output

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GHG Emissions Analysis

Project Construction Emissions

☐ The project requires non-road or off-road engines, equipment, or vehicles to complete. If yes:

Type of Equipment	Maximum Number Per Day	Total 8-Hour Days in Operation	Total $MTCO_2e$
			0
			0
			0
			0
			0
			0
			0
			0
			0
		Total Emissions	**0**

☐ The project requires materials to be transported to the project site. If yes:

Total Number of Round Trips	Average Trip Distance (Miles)	Total $MTCO_2e$
		0

☐ The project requires workers to commute to the project site. If yes:

Average Number of Workers	Total Number of Workdays	Average Round Trip Distance Traveled (Miles)	Total $MTCO_2e$
			0

☐ The project is expected to generate GHG emissions for other reasons. If yes, explain:

☒ The project does not have a construction phase and/or is not expected to generate GHG emissions during the construction phase.

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Project Operating Emissions

[ ] The project requires energy to operate. If yes:

Annual Energy Needed	Unit	Total $MTCO_2e$
	kWh (Electricity)	**0**
	Therm (Natural Gas)	**0**

[ ] The project will generate electricity. If yes:

Annual kWh Generated	Total $MTCO_2e$
	0

*A negative value indicates GHG reductions

[ ] The project will proactively manage forests to reduce wildfire risk. If yes:

Acres Protected from Wildfire	Total $MTCO_2e$
	0

*A negative value indicates GHG reductions

[ ] The project will affect wetland acreage. If yes:

Acres of Protected Wetlands	Total $MTCO_2e$
	0

*A negative value indicates GHG reductions

[ ] The project will include new trees. If yes:

Acres of Trees Planted	Total $MTCO_2e$
0	**0**

*A negative value indicates GHG reductions

[XX] Project operations are expected to generate or reduce GHG emissions for other reasons. If yes, explain:

Project may have minor GHG emissions related to vehicular travel for monitoring purposes.

GHG Emissions Summary

Construction and development will generate approximately:	0 $MTCO_2e$
In a given year, operation of the project will result in:	0 $MTCO_2e$